Tackling Climate Change in Agriculture: Approaches to Adaptation and Climate Smart Agriculture

Group Litchi
Litchi Orchard Management at Calebasse in the North

22th June 2018
Sustainable Development Goal

• To increase productivity and income over a period of five years
Litchi Production in Mauritius

- Litchi first reported in Mauritius in 1763
- Litchi introduced during the French colony (1715-1810) from China
- In 1929, during the British colony, varieties Sun Yat Sen, Green, Rose scented and Kafri were brought from India
- First litchi export to London in 1934 till 1939
- Export of litchi gain economic importance as from 1969
- From 1984 to 1990, 120 tonnes of litchi were exported annually
- After 1990 the export continued to rise
Current situation of the Litchi Industry in Mauritius

- Main variety - Tai So
- 346 litchi orchards covering a total area of 423 ha
- Fruit harvest season – early Nov. to early Jan.
- Export market: 250 to 300 tonnes annually
- Premium price for early season litchi
- Shift from backyard to intensive system of production over last decade
- Potential for regular bearing instead of every 2 yrs – through timely pruning, fertilization and irrigation
- 2017 ----- 70%
Climate Hazards the System might be exposed to

- Cyclone
- Heavy rainfall
- Drought / extended dry spells
- High temperature
- Erratic rainfall
Adaptation Measures

POLICY

• Soft loans
• Freight rebate scheme (FRS)
• MauriGap certification
• Development of a supply chain for processed litchi products
• Agricultural risk insurance
How do **policy** measures answer our goal?

- Policy measures will provide the necessary financial support (compensation and incentives) to help growers of the cooperative to face extreme climatic events (e.g. FRS)

- MauriGap: Guarantee - Safe food and fetching premium litchi price i.e. higher grower income

- Processing - Added value of litchi products for higher income and extended product availability to consumers
Adaptation Measures

TECHNICAL

• Technical information dissemination (media, publication, SMS disease alert, Meteo, APMIS)
• Pest and Disease Management
• Timely fertilizer application
How do technical measures answer our goal?

- Early warning system will contribute to decision making
- Proper cultural practices, including timely fertilization will ensure annual fruit bearing and therefore contribute to sustained productivity
Adaptation Measures

RESEARCH

• Introduction of new varieties
• Extend the shelf-life for export
• Decrease post-harvest losses
How do research measures answer our goal?

- Introduction of early varieties to avoid the cyclonic season/heavy rainfall for a resilient system
- Tolerance of varieties to high temperature, pest & disease for a greater fruit yield and revenue
- Eco-friendly technology to extend the shelf-life of litchi products and extend period for product marketing
Adaptation Measures

CAPACITY BUILDING

• Water management
• Tree management
• Agro-processing
• Setting up of a model farm
• Flower induction techniques
How do capacity building measures answer our goal?

• Empower growers to improve flowering, fruit set, and quality product

• Improve water use and fertilizer efficiency

• Create opportunity for value addition through processing

• Increase grower awareness about new production practices and increase production skills
Mitigation Potential

• Reduction in GHG through:
  1. The judicious use of fertilizers, and pesticides (IPM)
  2. Mulching,
  3. Increase in the carbon sink capacity (healthy canopy development),
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Litchi Group

- Keshav
- Patricia
- Satish
- Yogeeta
- Giantee
- Rajiv

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Thank you for your attention!